

SEQUENCE LISTING



<110> Rothschild, Max  
Kim, Kwan  
Larsen, Niels

<120> Melanocortin-4 Receptor Gene and Use as a Genetic Marker for Fat Content,  
Weight Gain, and/or Feed Consumption of Animals

<130> ISURF 2413

<140> 09/380,419

<141> 2000-07-24

<150> PCT/US99/16862

<151> 1999-07-26

<160> 26

<170> PatentIn version 3.0

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<211> 746

<212> DNA

<213> Sus scrofa

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Leu His Ser Pro Met Tyr Phe Phe Ile Cys Ser Leu Ala Val Ala Asp
35          40          45

Met Leu Val Ser Val Ser Asn Gly Ser Glu Thr Ile Ile Ile Thr Leu
50          55          60

Leu Asn Ser Thr Asp Thr Asp Ala Gln Ser Phe Thr Val Asn Ile Asp
65          70          75          80

Asn Val Ile Asp Ser Val Ile Cys Ser Ser Leu Leu Ala Ser Ile Cys

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85

90

95

Ser Leu Leu Ser Ile Ala Val Asp Arg Tyr Phe Thr Ile Phe Tyr Ala  
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Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly Ile Ser Ile  
 115 120 125

Ser Cys Ile Trp Ala Ala Cys Thr Val Ser Gly Ile Leu Phe Ile Ile  
 130 135 140

Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr Met Phe Phe  
 145 150 155 160

Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Met Phe Leu Met  
 165 170 175

Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly Thr Gly Ala  
 180 185 190

Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu Thr Ile Leu  
 195 200 205

Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu His Leu Ile  
 210 215 220

Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys Phe Met Ser  
 225 230 235 240

His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser Ile Ile Asp  
 245 250 255

Pro Leu Ile Tyr Ala Leu Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys  
 260 265 270

Glu Ile Ile Cys Cys Tyr Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser  
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Thr Leu Leu Asn Ser Thr Asp Thr Asp Ala Gln Ser Phe Thr Val Asn  
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Ile Asp Asn Val Ile Asp Ser Val Ile Cys Ser Ser Leu Leu Ala Ser  
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Ile Cys Ser Leu Leu Ser Ile Ala Val Asp Arg Tyr Phe Thr Ile Phe  
 65 70 75 80

Tyr Ala Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly Ile  
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Ile Ile Ser Cys Ile Trp Ala Val Cys Thr Val Ser Gly Val Leu Phe  
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Ile Ile Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr Val  
 115 120 125

Phe Phe Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Met Phe  
 130 135 140

Leu Met Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly Thr  
 145 150 155 160

Gly Thr Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu Thr  
 165 170 175

Ile Leu Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu His  
 180 185 190

Leu Ile Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys Phe  
 195 200 205

Met Ser His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser Ile  
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Phe Lys Glu Ile Ile Cys Cys Tyr  
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Asp Pro Leu Ile Tyr Ala  
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Met Asp Pro Leu Ile Tyr Ala  
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Asp Pro Leu Ile Tyr Ala  
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Ser Cys Arg

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Pro Leu Ile Tyr Ala Leu  
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Val Ile Tyr Thr Ile  
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Ile Leu Tyr Ala Phe Leu  
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